

tributed to a number of points in the Sacramento-San-Joaquin Valley as well. This is verified by specimens from an irrigating ditch near Fresno received from C. E. Jenney. It may be expected to turn up elsewhere.

A few days ago on a visit to the Coalinga Oil Fields a lengthy wait at Hanford was necessary to make train connections. While other passengers sat about with bored expressions or searched the town for amusements, the writer welcomed it as an opportunity to go forth in search of the elusive snail and walked out of town about half a mile east to a dry irrigating ditch. This had recently been prolific of molluscan life, and while scratching in the dried weeds for *Pisidia* a specimen of another *Vivipara* was found. *Pisidia* were forgotten and a systematic "muckraking" of every weed up and down the ditch for a hundred yards was only interrupted by the roar of the coming train. The spoils proved to be *Vivipara japonica* Mart., a number of which were still alive, though the ditch from all evidences had been dry for months.

V. japonica may be readily distinguished from *malleatus* by its sharper more acute spire, flatter whorls and fine spiral striae instead of the four lines of revolving punctures. The carinate base is usually retained throughout life while in all introduced *malleatus* seen it becomes obsolete before maturity is reached.

The Japanese, who are also fond of these, call them Tanisha or rice snails.

Pilsbry and Johnson (NAUTILUS, VII, 1894, p. 144) note that Taylor reports *Paludina japonica* (= *Vivipara*) from the Chinese markets of Victoria, B. C.

NEW JAPANESE NATICIDAE AND SCALARIIDAE.

BY HENRY A. PILSBRY.

Polinices pila, n. sp.

The shell is umbilicate, globular, with a short, conic spire; brown with lighter streaks, and partially covered with a very thin cuticle, worn from the back, which is somewhat flesh-colored. The surface is smooth except for fine, faint growth-lines which are strongly re-

tractive below the suture, and very faint, fine spiral striæ. Whorls $5\frac{1}{2}$, the earlier ones worn, blue, scarcely convex, the last 2 or $2\frac{1}{2}$ flattened below the suture, then convex; last whorl is somewhat concave below the suture, elsewhere well rounded. The aperture is only slightly oblique, half-circular, brown inside, with a white band within the acute lip, which is built forward near the upper insertion. The columella is white, rather thick, with a very weak, low lobe partially filling the umbilicus, above which a lobe projects angularly forward and is appressed to the shell wall. The parietal wall is almost nude in the middle but has a heavy white callus in and below the posterior angle of the aperture. The umbilicus is narrow.

Alt. 41.5, diam. 35.5 mm.

The operculum is thin, rich chestnut-colored, somewhat concave outside in dry specimens, with the nucleus near the columellar margin, as usual. It seems to comprise about $2\frac{1}{2}$ whorls.

Akkeshi, Kushiro. Cotypes no. 97973 A. N. S. P., and no. 1706 of Mr. Hirase's collection.

This form belongs to the subgenus *Lunatia*. It differs from the young stage of *P. lewisii* by the shape and uniform whiteness of the columellar callus (*pila*, a ball).

Polinices bathyraphe n. sp.

The shell is small, openly umbilicate, globose, white under a thin light yellow cuticle. The spire is very short and low, the early whorls white and worn. The suture is deeply impressed, and in the last whorl conspicuously channelled. The surface is shining, marked with fine growth-lines and minute spiral striæ, which are strongest around the umbilicus. There are $3\frac{1}{2}$ convex whorls, the last very large, flattened and depressed at the suture, elsewhere convex. The umbilicus is large and open. Aperture very oblique, half round, white within. Outer and basal lips are thin and sharp. Columella concave, obtuse and simple below, but above, in the umbilical region, it dilates, forming a small, slightly thickened lobe, to some extent arching over the umbilicus, and adnate above. The parietal wall is very short, white, and heavily calloused throughout.

Length 6, diam. 6.5 mm.; longest axis of the aperture 5.3 mm.

Fukura, Awaji, Cotypes no. 97974 A. N. S. P., and no. 1676 of Mr. Hirase's collection.

A miniature *Polinices*, resembling *P. montagui* Forbes and *P. pallida* B. & S., but very distinct by its conspicuously excavated suture (*bathyraphe*, deep suture.)

SCALA STIGMATICA n. sp.

Allied to *S. maculosa* Adams & Reeve. The shell is barely rimate, white, marked below the periphery with oblique oval brown spots in each inter-lamellar space, and sometimes with a few faint ones above the periphery. These spots are not sharply defined, but fade at their edges. The spire is straightly conic; embryonic whorl or whorls wanting in the specimens seen. Succeeding whorls are well rounded, separated by deep sutures. The last one or one and a half whorls are so deeply separated that they seem to be in contact only at the ribs. There is a very minute sculpture of fine, close, unequal engraved spiral lines in the intercostal spaces. The ribs are rather low and narrow, without points at the shoulder, or with them very indistinct; at irregular intervals there are larger, heavier ribs. Each of the last two whorls has eight ribs. The aperture is oblique, short-oval; peristome continuous, with a strong lip-varix.

Length 24, diam. $8\frac{1}{2}$ mm.; whorls remaining $9\frac{1}{4}$.

Length $20\frac{1}{2}$, diam. $8\frac{1}{2}$ mm.; whorls remaining 10.

Fukura, Awaji, Japan. Cotypes no. 88318 coll. Acad. Nat. Sci. Phila., from no. 1571 of Mr. Hirase's collection.

This species was determined as new in 1904, and was sent out under the above name by Mr. Hirase. Subsequently I thought it might be a form of *S. maculosa* A. and R., and the description was therefore withheld. Mr. G. B. Sowerby, who received specimens from Mr. Hirase, has kindly informed me that it is quite distinct. *S. stigmatica* is "much larger than *S. maculosa*, whorls more rounded, ribs more distant, and not at all angular or aculeated" at the shoulder.

(To be continued.)

LAND SHELLS OF ATLANTIC CITY, NEW JERSEY.

BY H. A. PILSBRY.

During August, 1909 and May, 1910, the writer spent two or three afternoons exploring certain small groves or copses standing in